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**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/317,409	05/24/99	LUCAS	S 1590.3037

005514 IM22/1120  
FITZPATRICK CELLA HARPER & SCINTO  
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EXAMINER	
BEFUMO, J	
ART UNIT	PAPER NUMBER
1771	6

DATE MAILED: 11/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/317,409	LUCAS ET AL.
	Examiner Jenna-Leigh Befumo	Art Unit 1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 October 2000.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-87 is/are pending in the application.

4a) Of the above claim(s) 1-54 and 60-87 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 55-59 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

18) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

19) Notice of Informal Patent Application (PTO-152)

20) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of October 20, 2000 in Paper No. 5 is acknowledged.

The traversal is on the ground(s) that the search of relevant art for the restricted groups will overlap producing duplicate work and inconsistent results. This is not found persuasive because of the reasons on record in the Office Action of September 29, 2000.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In claim 56, the second prepreg ply is not positively claimed. The claim states "when disposed on a second prepreg ply." It is not clear if the second prepreg ply is being claimed or if Applicant is only claiming the frictional characteristic between the stiffness-treated prepreg ply "WHEN DISPOSED" with another prepreg.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 55 is rejected under 35 U.S.C. 102(b) as being anticipated by Cordova et al.

(4,857,405).

Cordova et al. teaches high tenacity fiber used for reinforcing composites that is treated with an aqueous solution to improve stiffness (abstract). The reinforcing fiber can be in the form of a fabric (column 1, lines 30 – 32). Any conventional resin can be used to impregnate the stiffened fibers including thermosetting and thermoplastic resins (column 1, lines 35 – 38).

#### ***Claim Rejections - 35 USC § 102/103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 55-59 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Robinson (4,695,501).

Robinson teaches a composite article that comprises a non-woven resin impregnated layer and a synthetic resin foam layer (column 2, lines 8 – 15). The non-woven fabric layers increase that stiffness of the composite (column 2, lines 47 – 53). The resin used to impregnate the non-woven fabric layer is a B-stage resin (column 4, lines 21 – 22). The composite can include multiple prepreg layers as shown in Figures 3, 4, 6, and 7. The stiffness-treated fabric layers 5, 6, and 9 are coated with a resin layer 2A and 2B.

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Although Robinson does not explicitly teach the limitation of a greater frictional resistance than between the treated prepreg plies than the untreated prepreg plies in claims 56 - 59, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. prepgs made with stiffness treated fabric and resin systems) and in the similar production steps (i.e. plying the prepgs) used to produce the composite structure. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed frictional resistance would obviously have been provided by the process disclosed by Robinson. *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

8. Claims 55 – 59 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirshbueler et al. (4,539,253).

Hirshbueler et al. teaches a prepreg fabric that comprises a first layer of a fabric coated with an epoxy resin and a second layer of an epoxy resin modified with an elastomeric polymer (abstract). In the first layer the resin coating stiffens the reinforcing fabric. The prepreg fabric can be bi-layered (column 6, line 24).

Although Hirshbueler et al. does not explicitly teach the limitation of a greater frictional resistance than between the treated prepreg plies than the untreated prepreg plies in claims 56 - 59, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. prepgs made with stiffness treated fabric and resin systems) and in the similar production steps (i.e. plying the prepgs) used to produce the composite structure. The burden is upon the Applicant to prove otherwise. *In re*

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*Fitzgerald*, 205 USPQ 594. In the alternative, the claimed frictional resistance would obviously have been provided by the process disclosed by Hirshbueler et al. *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schurb (3,931,445), Edelman et al. (4,364,993), and Yamada et al (4,443,507) are drawn to composites that comprise coated fabric layers and resin systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (8:00am - 4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo  
November 13, 2000



CHERYL JUSKA  
PATENT EXAMINER